User
Manual

4-Source Audio/Video Hub
Model NSR4

NEXUS

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1 Introduction

The Nexus NSR4 is a 4-source media hub. It was designed for use in a range of applications from boardrooms to classrooms and anywhere else where selection among multiple audio/video sources is required to interface to a single VGA capable display unit.

The NSR4 features three VGA inputs with accompanying audio inputs as well as a single composite video input that accommodates a standard-definition PAL or NTSC source such as a DVD player. The NSR4 upscales the composite video input to one of four common user-selectable VGA standards.

The NSR4 has a powerful stereo audio amplifier providing ample sound level for most installations and a line-out facility for external amplifier use.

The NSR4 is controlled via the NSRK remote wall-mount keypad and also via LR15 Infra Red (IR) remote control.

The NSR4 is designed for 19” rack mounting, but may be used in a free-standing application if required.

The NSR4 is easy to set up and simple to use.

1.1 NSR4 Front Panel

The main on-off switch, status indicators (LEDs) and VGA standard select are located on the NSR4 front panel. The following photograph shows the layout of these features.

NSR4 Front Panel Layout

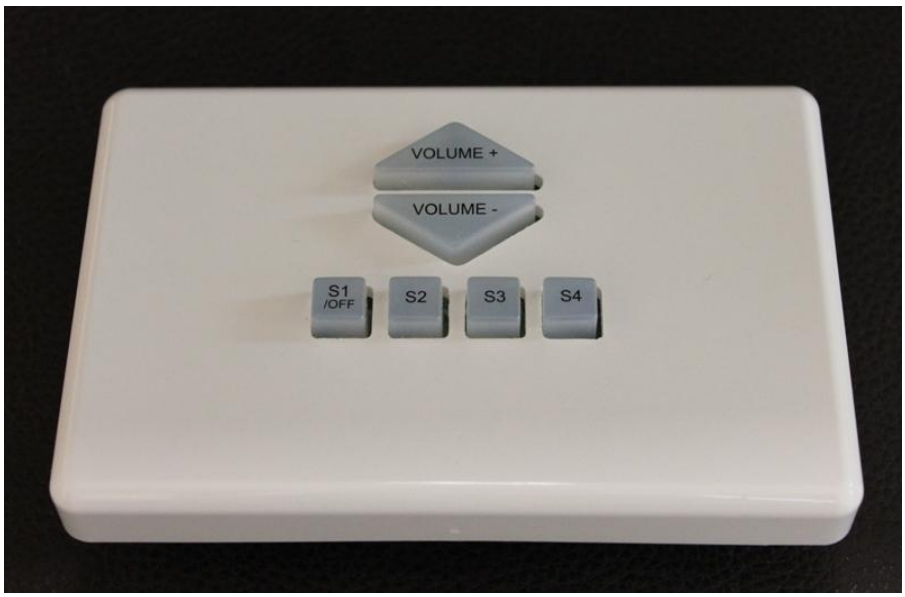
1.2 NSR4 Rear Panel

All interconnections to program sources and loudspeakers are made via the rear panel. The following photograph shows the layout of the connectors.

NSR4 Rear Panel Layout

1.3 NSRK Keypad

The NSRK keypad provides manual control of the NSR4's source selection and volume setting. The NSRK also includes an IR detector for the LR15 remote control.



NSRK Keypad Layout

1.4 LR15 Remote Control

Operation of the NSR4 by the LR15 IR Remote Control is the same as by the NSRK Keypad.

LR15 Remote Control

2 NSR4 Operation

2.1 Source Selection

With no source selected, the NSR4 will be in standby mode – indicated by the front panel red Standby LED being lit. Pressing any of the four source select buttons on the NSR4 will select the corresponding source (audio and video) connected to the rear of the NSR4. The selected source button will light up to confirm the source selection.

To return the NSR4 to standby, press and hold the Source 1 button for 10 seconds. Any previously illuminated NSR4 and NSRK source indication LED will now be extinguished.

2.2 Volume

Pressing the Volume up or down buttons on the NSRK will result in the volume increasing or decreasing accordingly. The up or down buttons will illuminate briefly for each volume increment or decrement. Press and hold the button in to have the volume “ramp” up or down automatically.

2.3 VGA Standard Selection

The Composite Video (source 4) VGA upscaler may be set to any one of four VGA standards. Press the front panel “Set” switch to move between the possible selections:

800 x 600 pixels
1024 x 768 pixels
1280 x 720 pixels
1280 x 1024 pixels

Choose the highest VGA standard that is supported by the VGA display device the NSR4 VGA output is connected to.

At all times the NSR4 is powered-up, the LED corresponding to the selected VGA upscaler standard will remain lit, even when the NSR4 is in standby mode.

2.4 Remote Control Operation

Source selection, Volume Up and Down and Standby operation is also available from the LR15 remote control. The corresponding buttons on the NSRK will illuminate when control is initiated by the remote.

2.5 Over-Temperature Operation

The NSR4 features protection algorithms to prevent damage to the device from overheating or excess power drain.

2.5.1 Overheating Protection

The NSR4 will automatically reduce the amplifier gain if the temperature inside the unit rises above a pre-set threshold. The gain will slowly but steadily decrease over time until the temperature drops and will then start increasing again. This is not likely to be encountered in normal program material, even when operating at full volume, but is a safeguard to cover internal temperature rise caused by a high ambient temperature such as may be found in an equipment rack.

2.5.2 Excessive Power Demand

Should the NSR4 experience an unusually high momentary power demand – usually caused by a volume transient when operating at full or close to full audio power - the device may enter automatic shut down and restart. In such a circumstance, the volume will be reduced to a safe level that may require subsequent adjustment.

3 Installation

Before commencing installation, please read the Important Safety Information provided at the back of this document.

Installation of the NSR4 is simply a matter of mounting the unit into the equipment rack and connecting the appropriate input and output cables.

The NSR4 requires adequate air circulation to keep it cool. Observe at least ½ RU clearance both above and below the unit. Fan-forced air circulation may be required in high-density rack installations.

The NSR4 is capable of delivering high quality VGA video, but the overall system performance will be degraded if low quality VGA leads are used. This may take the form of blurred edges on contrast transitions and or multiple echoes of such edges. Try to avoid the use of such cables if at all possible.

Use quality audio leads and route these away from mains wiring wherever possible.

A transition plug is provided with the NSR4 to give screw-terminal connections for the speakers and allow the unit to be easily demounted if necessary. Keep the speaker leads as short as practical within reason to maximise the energy delivered to the speakers.

A standard CAT5 lead is used to interconnect with the NSRK. This may be wired to either T-568A or T-568B standard provided both ends are wired the same. Do not use a crossover lead.

[Ends]

Appendix A: Specifications

Parameter	Specification
Output Power Capability	50W RMS (25W per channel / 4Ω, music program)
Full Load Impedance Range	4 to 16Ω
Operating Temperature Range	0 to 40°C
Storage Temperature Range	0 to 90°C
Operating Humidity Range	20 to 90% RH Non-condensing
Storage Humidity Range	20 to 90% RH Non-condensing
Cooling	Convection
Inputs 1 through 3	DB15HD female socket for VGA graphics 3.5mm female socket for stereo PC Audio
Input 4	RCA female socket for composite video Dual RCA female sockets for stereo audio
VGA standards supported	800x600, 1024 x 768, 1280 x 720, 1280 x 1024
Composite standards supported	720 x 625 lines / 50Hz (PAL) 680 x 525 lines / 60 Hz (NTSC)
Audio line level input	2.8Vpp (1V RMS) max
Audio line level output	2.8Vpp (1V RMS) max
Remote Control	NSRK remote keypad
Remote Control Interconnect	CAT5 cable via RJ45 connectors
Remote Control	Source select, volume, standby
IR Remote Control	Source select, volume, standby
Power Supply	220 to 240Vac, 50Hz
Maximum Supply Current	1A / 240Vac
Power Connector	3-pin IEC socket
Mounting Clearances	1RU above and below appliance
Dimensions (W x D x H)	426 x 45 x 185 (w x h x d)
Weight	3Kg

Nexus Model NSR4 A/V Hub
Important Safety Information

CAUTION

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE THE COVER.
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, RETURN THE APPLIANCE TO THE MANUFACTURER.

WARNING

SHOCK HAZARD. DO NOT OPEN.
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
EQUIPMENT MUST BE CONNECTED TO A MAINS SOCKET OUTLET WITH PROTECTIVE EARTH CONNECTION.

MAINS LEADS

This appliance is supplied with a non-rewireable mains lead.
Replacement mains leads can be obtained from Nexus Technologies Pty Ltd.

General Safety Instructions

1. Read instructions. Read the safety and operating instructions before operating the appliance.
2. Retain instructions. Retain the safety and operating instructions for future reference.
3. Heed warnings. Observe all warnings on the appliance and in the operating instructions.
4. Follow instructions. Follow all operating and use instructions.
5. Water and moisture. Do not use the appliance near water, for example near a washbowl, sink or in a wet basement.
6. Ventilation. Site the appliance so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated close to surfaces that may block the ventilation openings, or placed in a sealed, unventilated rack that may impede the flow of air through the ventilation openings.
7. Heat. Site the appliance away from heat sources such as radiators, heaters, stoves, or other appliances (including other amplifiers) that produce heat.
8. Power sources. Connect the appliance to a power supply only of the type described in the operating instructions or marked on the appliance.
9. Cleaning. The product should be cleaned only as recommended by the manufacturer.
10. Objects and liquid entry. Do not let objects or liquids fall into the product. Do not expose the product to dripping or splashing.
Do not place a vessel containing liquid on top of the product.
11. Damage requiring service. The product should be serviced by qualified personnel if:
a) The power cord or plug has been damaged.
b) Objects or liquid have fallen into the product.
c) The product has been exposed to rain.
d) The product does not appear to operate normally or exhibits a marked change in operation.
e) The product has been dropped or the enclosure damaged.
12. Servicing. Do not attempt to service the product beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

Replacing the Fuse in the NSR4

This appliance is fitted with a factory-only replaceable fuse. If the fuse has blown it cannot be replaced in the field. Return the appliance to the factory for service.

Do Not attempt to open the case or replace the fuse.